

IN THE ABSTRACT:

Please replace the abstract with the following:

W3 A power transmission chain has rows of pivotally connected, interleaved drive links and guide links. One guide link is included in each row of links and the guide links are positioned on alternate lateral sides of the chain in each row. A sprocket that can engage the power transmission chain has teeth that extend radially outwardly at the periphery of the sprocket. The sprocket teeth are separated from adjacent teeth by a distance that is approximately the length of the links of the chain.

REMARKS

Claims one through ten remain in this application. No claims beyond those for which a fee has been paid are added by this amendment. The applicants request further examination of the application in view of the amendments and remarks as set out below.

Paragraph 1 of the communication dated August 8, 2002, objects to the Figures 1, 2, and 3 of the drawings for failing to identify those figures as disclosing prior art. Proposed corrected drawings are submitted herewith. The applicants request approval of the proposed corrected drawings and that the objection to the drawings be withdrawn.

Paragraph 2 of the communication dated August 8, 2002, objects to the abstract. A corrected abstract is submitted above. The applicants request that the objection to the abstract be withdrawn.

Paragraph 4 of the communication of August 8, 2002 rejects independent claim 6 and dependent claims 7 – 10 which depend from claim 6 under 35 U.S.C. §112, second paragraph as indefinite. The communication states that claim 6 is unclear regarding the location of the interleaved drive link as claimed at lines 21 – 22 of claim 6. Claim 6 has been amended to clarify the claimed configuration. At lines 15 – 20, amended claim 6 requires a plurality of series of interleaved drive links. The interleaved series are positioned so that a drive link of one series is adjacent at each of its ends to a drive link of an interleaved series. The drive links of the interleaved series that are adjacent at each end of the drive link are then between the drive link and the guide link. Applicants submit that claim 6, as amended, is not indefinite and claims 7 through 10 that depend from claim 6 are also not indefinite.

Paragraph 6 of the communication of August 8, 2002 rejects claims 1 – 4 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 1,463,789 to Braddock (“Braddock ‘789”). Independent claim 1 and claims 2 through 4 that depend from claim 1, require a first series of links and a second series of links, each series having rows of links, and each row of links having a guide link and a drive link. A drive link or driving link engages a sprocket for driving contact. See e.g. p. 5 lines 5 – 13, p. 17 lines 14 – 22. Guide links do not engage the sprocket for driving contact, but rather position the chain on the sprocket laterally. See p. 6 lines 9 – 23. Braddock ‘789 does not disclose a chain having guide links. Rather, Braddock ‘789 discloses a chain comprising links (members 10) that each include a tooth 12 to engage a sprocket. Page 1, lines 50 – 60, 79 – 84, Figs. 1, 2, 4. Braddock ‘789 does not anticipate applicants’ claim 1 or claims 2 through 4 that depend from claim 1.

Paragraph 8 of the communication of August 8, 2002 rejects claims 1 – 10 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 1,201,748 to Luce (“Luce ‘748”) in view of U.S. Patent No. 1,956,942 to Belcher et al. (“Belcher et al. ‘942”). Luce ‘748 discloses a sprocket and chain. The sprocket is formed by four steel plates that each form a single circumferential row of teeth around the sprocket. The teeth of adjacent sprocket plates are positioned midway between the teeth of the adjacent plates. Fig. 1, page 1 lines 40 – 63. The chain of Luce ‘748 is formed by rows of links that are staggered to create spaces between the links that will accept the sprocket teeth. The spaces of one row are between the spaces of an adjacent row. Page 1 lines 78 – 85. Edge or guard links form a row adjacent to the sprocket teeth at the sides of the sprocket. The edge or guard links may be staggered on opposite sides of the chain. Page 1, lines 90 – 93, Figs. 1 and 2. Each row has two regular links and a guide link. Fig. 1. Belcher et al. ‘942 discloses a chain that drives sprockets on opposite sides of the chain. Fig. 2. The chain of Belcher et al. is formed by pitches of links that each form two teeth. Page 1, lines 28 – 34. The teeth of adjacent pitches face in opposite directions. Figs. 2 – 4 and page 1 lines 56 – 59. This chain of Belcher et al. ‘942 engages a sprocket by internal engagement, that is by positioning a pitch astride the sprocket tooth so that the sprocket tooth is between and engaged by both teeth of the links of the pitch. The chain of Belcher et al. ‘942 also engages the sprocket tooth by external contact with the backs of sprocket teeth of adjoining pitches. Fig. 4, page 1 lines 59 – 65. The chain of Belcher et al. ‘942 includes guide links on opposite sides of each pitch. Fig. 1, page 1 line 37 and lines 48 – 51. In another embodiment of Belcher ‘942, the chain engages sprocket teeth only by internal engagement. Fig. 5, page 1 lines 91 – 103.

Neither Luce '748 nor Belcher et al. '942, nor a combination of those references disclose applicants' invention. Claim 1 requires two series of links, each having rows of links comprising a guide link separated from a drive link. As amended, claim 1 requires that the series are interleaved so that drive link of each interleaved row of each series is between and adjacent to the drive link and guide link of each adjacent row of the other series. Claim 1 lines 32 – 38. Similarly, as amended claim 6 requires each drive link to be between and adjacent to a drive link and a guide link. Claim 6 lines 21 – 25. The chain of Luce '748 does not have a drive link that is adjacent to a guide link of that row that interleaves with a guide link and a drive link of an adjacent row, and that is adjacent to a guide link of the interleaved row. Rather, Luce '748 has multiple drive links in each row so that a drive link that is adjacent to a guide link is interleaved between drive links of the adjacent row, not between a drive link and a guide link.

Claim 2 and claims 3 and 5 that depend from claim 2, and claim 9 require that the drive links form two teeth that extend from the links in a front direction. The links of Belcher et al. '942 form teeth that extend in opposite directions in adjacent rows. Belcher et al. '942 does not teach the chain as claimed by applicants. Further, Belcher et al. '942 teaches that the links are astride teeth of the sprocket. Applicants' amended claim 6 requires that the drive links are between sprocket teeth.

Neither Luce '748 nor Belcher et al. '942 nor any other prior art of record teaches or suggests applicant's invention as claimed.

Versions of these amended abstract and claims showing the changes that are made to the specification by these replacement paragraphs are attached.

CONCLUSION

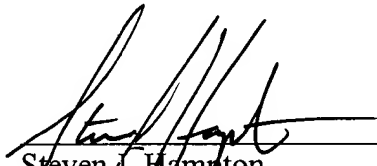
As set out above, the claims distinguish over the prior art of record. As discussed above, the claims are believed to be in condition for allowance, and that action is respectfully requested.

Please charge any additional fees or credit overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please note that deleted text is indicated by strikethrough and newly inserted text is underlined.

5 1. (Amended) A power transmission chain comprising:

a first series of links comprising a plurality rows of links positioned adjacent to each other and separated along a chain direction, the rows of the first series of links including:

10 a guide link and a drive link, the guide link separated from the drive link in a first lateral direction that is perpendicular to the chain direction, and the guide link and the drive link being substantially the same length along the chain direction;

a second series of links comprising a plurality rows of links positioned adjacent to each other and separated along a chain direction, the rows of the second series of links including:

15 a guide link and a drive link, the guide link separated from the drive link in a second lateral direction that is perpendicular to the chain direction and opposite the first lateral direction, the guide link and the drive link being substantially the same length along the chain direction;

the rows of the first series separated along the chain direction by a distance that is less than a length along the chain direction of the links of the second series,

20 the rows of the second series separated along the chain direction by a distance that is less than a length along the chain direction of the links of the first series;

the first series and the second series interleaved along the chain direction so that a row of links of the second series is positioned between and extending adjacent to links of adjacent rows of the first series and a row of links of the first series is positioned between and extending adjacent to links of adjacent rows of the second series,

5 the drive link of each interleaved row of the first series extending between and adjacent to the drive link and guide link of each row of the second series adjacent to the drive link of the row of the first series and the drive link of each interleaved row of the second series extending between and adjacent to the drive link and guide link of each row of the first series adjacent to the drive link of the row of the second series;

10 each row of links of the first series being pivotally connected to each row of the second series interleaved with the row of the first series at locations near the ends of the links of the first series along the chain direction where the adjacent rows of the first series and the second series are interleaved;

15 each row of links of the second series being pivotally connected to each row of the first series interleaved with the row of the second series at locations near the ends of the links of the second series along the chain direction where the adjacent rows of the first series and second series are interleaved;

20 whereby, separations along the chain direction between ends of drive links of adjacent rows of the first series are adjacent to the drive links of the second series and separations along the chain direction between ends of drive links of adjacent rows of the second series are adjacent

to the drive links of the first series and the guide links of alternate rows along the chain direction are positioned on alternate lateral sides of the power transmission chain.

6. (Amended) A sprocket and power transmission chain comprising:

a sprocket having sprocket teeth extending radially outwardly at an outer surface of the sprocket, the sprocket teeth

5 arranged in a plurality of series around circumference of the sprocket, with adjacent series offset from each other along a direction generally perpendicular to the series.

the teeth of each series separated from adjacent sprocket teeth of the series to accept a drive link of a power transmission chain between adjacent sprocket teeth,

10 a power transmission chain having a plurality of series of laterally adjacent interleaved, pivotally connected drive links, each drive link of a series positioned adjacent to two drive links of a laterally adjacent series, one at each opposite end of the drive link along a chain direction,

the chain having a guide link laterally adjacent to and separated from each of the drive links, so that an interleaved drive link is between and adjacent to the guide link and drive link at 15 each opposite ends of the drive link along the chain direction; and

the power transmission chain engaging the sprocket positioning a first series of drive links between and engaging teeth of a first series of sprocket teeth and a second series of drive links between and engaging a second series of sprocket teeth.

ABSTRACT

~~A sprocket for engaging a power transmission chain with offset series of drive links and~~
5 ~~guide links is disclosed. The sprocket has teeth that extend radially outwardly at the periphery of~~
~~the sprocket that support a chain engaging the sprocket. The sprocket teeth are separated from~~
~~adjacent teeth by a distance that is approximately the length of the links of the chain. A power~~
~~transmission chain is disclosed that has rows of pivotally connected, interleaved drive links and~~
~~guide links. One guide link is included in each row of links and the guide links are positioned on~~
10 ~~alternate lateral sides of the chain by each row.~~

A power transmission chain has rows of pivotally connected, interleaved drive links and
guide links. One guide link is included in each row of links and the guide links are positioned on
alternate lateral sides of the chain in each row. A sprocket that can engage the power
transmission chain has teeth that extend radially outwardly at the periphery of the sprocket. The
5 sprocket teeth are separated from adjacent teeth by a distance that is approximately the length of
the links of the chain.